HW#79H: Properties of Tangents

Honors Geometry

Due Date: Monday April 20th, 2015

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TP: \_\_\_\_\_\_\_

**Failure to show all work and write in complete sentences will result in LaSalle!**

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| 1) Use ⊙*P* to draw the part of the circle described or answer the question. | 2) Suppose a space shuttle is orbiting about 180 miles above Earth. What is the distance *d* from the shuttle to the horizon? The radius of Earth is about 4000 miles. Round your answer to the nearest tenth. |
| 3) The points *K* and *M* are points of tangency. Find the value(s) of x. | 4) The points *K* and *M* are points of tangency. Find the value(s) of x. |
| 5) On a softball field, home plate is 38 feet from the pitching circle. Home plate is about 45.3 feet from a  point of tangency on the circle.     1. How far is it from home plate to a point of tangency on the other side of the pitching circle? 2. What is the radius of the pitching circle? | 6) A green on a golf course is in the shape of a circle. Your golf ball is 8 feet from the edge of the green and 32 feet from a point of tangency on the green as shown in the figure.     1. Assuming the green is flat, what is the radius of the green?      1. How far is your golf ball from the cup of the green? |

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| 7)  **Given:**    **Prove:**      \*hint – draw in triangles and use a triangle congruency (SSS, SAS, ASA, AAS, HL) |  |
| 8) The segment through point B is tangent to circle A. | 1. What is the slope of AB? 2. What is the slope of the tangent? 3. What is the equation of the tangent? 4. Do your answers from a & b support the definition of tangent? |
| 9) Find the perimeter of the triangle. Assume that lines which appear to be tangent are tangent. | 10) Find the angle measure indicated. Assume that lines which appear to be tangent are tangent. |